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**Development of Simplified Backyard Hatchery Propagation and Grow-Out Culture Methods for Pearl Oysters as Alternative Livelihood Opportunities for Palaweños**

**GRANTEE:** Western Philippines University (WPU)

**PRINCIPAL INVESTIGATOR:** Dr. Roger G. Dolorosa

**INDUSTRY PARTNER:** KRISJEWELS Pearl Culture & Hatchery, Inc.

**GRANT PERIOD:** September 1, 2016 to August 31, 2017

**GRANT AMOUNT:** Php 5,103,426.45 (approximately USD108,600)

**A simple hatchery for raising pearl oysters**

The mass production of pearl gems from farmed pearl oysters is a multi-billion-dollar industry in more than 30 countries in Australasia, the Middle East, and South America. Pearl farms are generally monopolized by large companies, although there are some small-scale operators in some countries. In Palawan, pearl farms spanning over 50,000 hectares have been operated by a few large companies for several decades.



*Pearl oyster breeders being induced to spawn as part of the simple hatchery being developed by the project*

To encourage the entry of small-scale investors and ordinary people of fishing communities in the pearl oyster farming business, WPU, with support from USAID STRIDE, is pursuing the development of simple and cheap hatchery and growth protocols for the black-lip pearl oyster *Pinctada margaritifera*. The research, funded by a STRIDE CARWIN grant, will also help determine the acceptability and economic

viability of contract growing schemes among local communities involved in oyster farming once the hatchery and grow-out protocols have been simplified.

The first of six experiments on larval production started in the first week of October 2016, after a month-long preparation. From a total number of 8,880,000 eggs, 3,240,000 trochophore larvae or 36.5% were hatched and raised in 12 drums undergoing four treatments. After a week, the pearl oyster larvae (umbo stage) numbered 2,880,000, a reduction to 32.4% from the initial survival rate. The research team is expected to harvest and transfer the settled spat (young pearl oysters) in grow-out facilities. The project will undertake several grow-out experiments involving the use



*Members of the research team prepare to deploy pearl oysters (*Pinctada margaritifera*) as part of the grow-out process*

of indigenous materials in culture-net baskets subjected to two different conditions (with and without periodic cleaning).

During the focus group discussion, the research team secured the commitment and willingness of the host community to engage in contract growing of pearl oysters in the proposed site with the backing of barangay council and purok leaders. The community is highly interested and has requested assistance from the industry partner to assess the site and discuss contract growing schemes for cooperation.

The involvement of coastal folks in small-scale pearl oyster farming can provide alternative livelihoods; thereby discouraging destructive fishing activities. Pearl farms serve as marine sanctuaries, thus promoting biodiversity conservation and sustainable fisheries. The establishment of backyard pearl oyster hatcheries can also help in the study of other marine species, leading to further development of marine culture.